

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte FREDERIK PONSE

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Appeal No. 1999-0843  
Application No. 08/666,970

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ON BRIEF

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Before KRASS, RUGGIERO, and BLANKENSHIP, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-9 and 12-16. Claims 10 and 11 have been allowed by the Examiner. An amendment filed December 4, 1997 after final rejection was approved for entry by the Examiner.

The claimed invention relates to a semiconductor component in which at least one transistor is formed on a

semiconductor substrate. A plurality of electrode terminals are formed with at least one finger section and a first contact area section disposed laterally with respect to and connected to a respective finger section. According to page 4 of Appellant's specification, at least one of the electrode terminals has a second contact area section which is disposed laterally opposite the first contact area section across the finger section, the resulting structure serving to provide increased heat dissipation.

Representative claim 1 is reproduced as follows:

1. A semiconductor component, comprising:

a semiconductor substrate having a main surface;

at least one transistor formed on said semiconductor substrate with a gate or base terminal, with a source or emitter terminal, and with a drain or collector terminal;

first, second and third electrode terminals formed on said main surface of said semiconductor substrate and electrically insulated from one another, said electrode terminals being respectively associated with said gate or base terminal, with said source or emitter terminal, and with said drain or collector terminal of said at least one transistor;

each of said electrode terminals being formed with at least one electrode terminal finger section, and a first contact area section electrically connected to a respective finger section and being disposed laterally thereof; and

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at least one of said electrode terminals having a second contact area section electrically connected to said respective finger section and being disposed laterally opposite said first contact area section across said finger section.

The Examiner relies on the following prior art references:<sup>1</sup>

Kaneko 62-296475 Dec. 23, 1987  
(Published Japanese Patent Application)<sup>2</sup>

Kojima et al. (Kojima) EP 0 494 625 A1 Jul. 15,  
1992  
(Published European Patent Application)

NE 9004 Series Data Sheet (NEC), Electrical Characteristics, Chip Dimensions and Handling, Chapter 2-22 (undated).<sup>3</sup>

Claims 1-3, 6, 7, and 12-16 stand finally rejected under 35 U.S.C. § 102(f) as being anticipated by Appellant's admitted prior art. Claims 1-4 and 6-8 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Kaneko. Claims 5, 9, and 12-16 stand finally rejected under

<sup>1</sup> In addition, the Examiner relies on Appellant's admissions as to the prior art as illustrated in Figure 1 of the drawings along with the accompanying description in the specification.

<sup>2</sup> A copy of a translation provided by the U.S. Patent and Trademark Office, June 31, 1998, is enclosed with this decision.

<sup>3</sup> Although no publication date appears on this document, it was part of a submission of admitted prior art in the Information Disclosure Statement filed September 19, 1996 (Paper No. 4).

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35 U.S.C. § 103(a). As evidence of obviousness, the Examiner offers Kaneko in view of Kojima with respect to claims 5 and 9, and Kaneko in view of NEC with respect to claims 12-16.

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Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs<sup>4</sup> and Answer for the respective details.

#### OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, and the evidence of anticipation and obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer. It is our view, after consideration of the record before us, that the disclosure of Appellant's admitted prior art fully meets the invention as recited in claims 1-3, 6, 7, and 12-16.<sup>5</sup> We

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<sup>4</sup> The Appeal Brief (Paper No. 12) was filed March 9, 1998. In response to the Examiner's Answer (Paper No. 13) dated March 31, 1998, a Reply Brief (Paper No. 15) was filed June 2, 1998, which was acknowledged and entered by the Examiner without further comment as indicated in the communication (Paper No. 16) dated August 18, 1998.

<sup>5</sup> While we do not consider paragraph (f) of 35 U.S.C. § 102 to be the appropriate basis for the anticipatory rejection in the present factual situation, the rejection qualifies under other paragraphs of 35 U.S.C. § 102.

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are also of the view that the disclosure of Kaneko fully meets the invention as set forth in claims 1-4 and 6-8. In addition, we are of the opinion that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention set forth in claims 5, 9, and 12-16. Accordingly, we affirm.

Although Appellant has nominally asserted (Brief, page 10) the separate patentability of each of the claims on appeal, separate arguments for patentability have been provided only for independent claim 1. Dependent claims 2-9 and 12-16 have not been argued separately in the Briefs and, accordingly, will stand or fall with their base claim 1. We will select independent claim 1 as the representative claim for all of the rejections before us on appeal. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

We first consider the Examiner's anticipatory rejection of claims 1-3, 6, 7, and 12-16 based on the disclosure of the admitted prior art in Appellant's specification. Anticipation

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is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.), cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

With respect to representative independent claim 1, the Examiner has indicated (Answer, pages 3 and 4) how the various limitations of claim 1 are read on the admitted prior art. In the Examiner's analysis, a 90 degree rotation of the admitted prior art semiconductor device structure illustrated in Appellant's Figure 1 would result in a device in which at least

one electrode (i.e., the D electrode) has a second contact area disposed laterally opposite a first contact area across a finger (i.e., the center finger) section as claimed.

We agree with the Examiner that semiconductor devices in actual practice can be fabricated and used in any orientation

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and, accordingly, the Examiner's analysis, in our view, is sufficiently reasonable that we find that the Examiner has at least satisfied the burden of presenting a prima facie case of anticipation. The burden is, therefore, upon Appellant to come forward with evidence and/or arguments which persuasively rebut the Examiner's prima facie case. Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Brief have not been considered (see 37 CFR § 1.192(a)).

Our review of Appellant's response in the Briefs reveals that no arguments have been presented concerning the Examiner's interpretation of the admitted prior art illustrated in Appellant's Figure 1. To the contrary, Appellant's sole argument (Brief, pages 11 and 12) is to repeat the language of claim 1 and make the general assertion that the prior art does not disclose the claimed structure. In our opinion, the Examiner's prima facie case of anticipation based on the admitted prior art remains un rebutted by any persuasive arguments from Appellant. Accordingly, since all of the claimed limitations are present



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in the disclosure of the admitted prior art, the Examiner's 35 U.S.C. § 102 rejection of independent claim 1, and claims 2, 3, 6, 7, and 12-16 which fall with claim 1, is sustained.

We also sustain the Examiner's 35 U.S.C. § 102(b) rejection of claims 1-4 and 6-8 as being anticipated by Kaneko. Considering representative claim 1, we agree with the Examiner that the semiconductor device structure illustrated in Figure 1 of Kaneko discloses that the electrode 4 has first and second contact areas  $a_1$  and  $a_2$  being disposed laterally opposite each other across a finger section.

We find Appellant's arguments in response to this rejection (Brief, pages 13 and 14) to be unpersuasive. Initially, we find Appellant's argument that Kaneko's device is directed to phase compensation rather than the heat dissipation problem purported to be solved by Appellant's invention to be without merit in determining the appropriateness of a rejection based on anticipation. We further find to be unfounded Appellant's further contention that, contrary to the claimed invention, the contact areas  $4a_1$  and  $4a_2$  in Kaneko are located on the same side of an imaginary center line of the structure, i.e., on the same side as the

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source finger connection 2 while the drain finger connection 5 is on the opposite side. It is our view, however, that, notwithstanding the merits of Appellant's interpretation of the finger arrangement of Kaneko, such argument is not commensurate with the scope of claim 1. It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation consistent with the specification, and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). Moreover, limitations are not to be read into the claims from the specification. In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). We find no recitation in representative claim 1 of any relative orientation requirement among the source, drain, and gate electrodes, let alone any recitation of a center line, imaginary or otherwise.

Lastly, we turn to a consideration of the Examiner's obviousness rejection of claims 5 and 9 based on the

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combination of Kaneko and Kojima, and the rejection of claims 12-16 based on the combination of Kaneko and NEC. Appellant's response to this rejection (Brief, pages 13-15) reiterates the argument that the electrode connections in Kojima and NEC are on only one side of a multifinger arrangement. It is apparent from the Examiner's analysis (Answer, page 6), however, that the Kojima and NEC references were applied solely to address the air bridge and via hole features of claims 5, 9, and 12-16. These references were applied in combination with Kaneko to establish the basis for the obviousness rejection. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986).

In view of the above discussion, since the Examiner's prima facie case of obviousness has not been rebutted by any convincing arguments from Appellant, the Examiner's 35 U.S.C. § 103(a) rejection of claims 5, 9, and 12-16 is sustained.

In summary, we have sustained all of the Examiner's rejections of the claims on appeal. Therefore, the decision

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of the Examiner rejecting claims 1-9 and 12-16 is affirmed.

No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 C.F.R.  
§ 1.136(a).

AFFIRMED

ERROL A. KRASS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JOSEPH F. RUGGIERO	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
HOWARD B. BLANKENSHIP	)	
Administrative Patent Judge	)	

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